

SALES & MARKETING MANAGEMENT

C1200-1

JULY 1991

A BILL PUBLICATION
FOUR DOLLARS

CULTURE CLASH

DOES JAPANESE MANAGEMENT WORK IN AMERICA?

Long, Jeanne
S R I Acquisitions Editor
Congressional Information Svs
4520 East-west Highway
Bethesda MD 20814 3389

009



**TRADE
SHOWS**

Tips and Travails

**SPECIAL
SUPPLEMENT**

Business-to-Business Selling

TRAINING

Counting on
Creativity

SALES & MARKETING MANAGEMENT



COVER BY GEORGE O'BREMSKI

FEATURES

- 28 CULTURE CLASH: WEST MEETS EAST**
Are the Japanese really better marketers than we are? American managers working at Japanese firms offer their views on this volatile issue.
- 36 WHAT'S THE BIG IDEA?**
More and more companies are turning to creativity training to make their salespeople better problem solvers.
- 42 TRADE SHOW TIPS AND TRAVAILS**
Thinking about marketing your products or services via trade shows? Fine. Just be careful where you plug in that extension cord.
- 50 THE NEXT VOICE YOU HEAR...**
More than a glorified answering machine, voice processing is being used to improve service, communications, and sales performance.

SPECIAL SUPPLEMENT—BUSINESS-TO-BUSINESS SELLING

- 56 DATA-SMART PROSPECTING**
Here's a look at how business-to-business data can be used to grow marketing success.
- 59 OPPORTUNITY KNOCKS**
Marketing manager Eric Docter explains the theory behind what he calls "Opportunity Marketing."
- 62 DATA SUPPLEMENT: U.S. TOTALS FOR 4-DIGIT SIC INDUSTRIES**
A statistical overview of the nation's economic output, showing establishment, employment, and shipment/receipt totals for more than 700 individual industries.

DEPARTMENTS

- 5 THE RACE**
6 LETTERS
8 SALES FORCE MANAGEMENT
12 TRAVELERS' NETWORK
14 YOU SAID IT
21 SHORT TAKES
68 COMPUTERS
70 BUSINESS ETIQUETTE
71 HIRING & TRAINING
72 SALES TOOLS
74 ADVERTISING/PROMOTION
77 OFFBEAT MARKETING
78 SALES MART
80 PRODUCT SERVICE SHOWCASE
82 AD INDEX
83 WORTH WRITING FOR

SALES & MARKETING MANAGEMENT

EDITOR: Richard P. Kern

MANAGING EDITOR: William Keenan Jr.

EXECUTIVE EDITOR: Louise I. Driben

GENERAL EDITOR: Martin Everett

COPY EDITOR: Wendy Swanoe

SENIOR EDITORS: Thayer C. Taylor,

Arthur Bragg, Bill Kelley

SENIOR ASSOCIATE EDITORS: Richard

Szuchmayer, Bristol Voss, Betsy Wieseradanger

ASSOCIATE EDITORS: Melissa

Campanelli, Kerry Rottenberger

ASSISTANT EDITOR: Pearl Reid

ART DIRECTOR: Charles P. Doherty

ASSOCIATE ART DIRECTOR:

Michael Dumycz

PRODUCTION EDITOR: Dorothy McFeeley

CONTRIBUTING EDITORS:

Business Etiquette, Ann Marie Sabath;

Cooperative Advertising, Ed Crimmins;

Market Analysis, Edward J. Spar; Meetings,

Homer Smith; Motivation, Thomas L. Quick;

Sales Force Management, Jack Falvey;

Travelers' Network, Gerald A. Michaelson

PUBLISHER: Howard M. Neibart

PRODUCTION MANAGER: Joann De Palma

ADVERTISING PRODUCTION

MANAGER: Rosann Virgili

MARKETING/SALES DEVELOPMENT

MANAGER: Marilyn Rosen

CONTROLLER: Joseph J. Furey

ADVERTISING: 212-986-4800, x2254

SUBSCRIPTIONS: 215-630-1549

SURVEYS, CATALOGUE PRODUCTS:

800-253-6708

WHOLE REPRINTS: 313-761-4700

MULTIPLE REPRINTS: 201-423-3600

PERMISSIONS, ARTICLE SEARCH:

212-984-2400

BACK ISSUES: 212-973-4911

VOL. 143, NO. 8 *Sales & Marketing Management* ISSN 0163-7517 is published monthly except in June, August, and October, when it is published twice a month, by Bill Communications Inc., 633 Third Avenue, New York, NY 10017, Canadian Post International Publications Mail (Canadian Distribution) Sales Agreement No. 546275. Telephone: 212-986-4800. Copyright 1991 by Bill Communications, Inc. All rights reserved. Subscriptions in the U.S. and its possessions, \$48. Canada, \$62 (U.S.). Foreign, \$77 (U.S.). Allow 4 to 6 weeks for first issue to arrive. Second Class Postage paid at New York, NY, and at additional offices. Postmaster: Send address corrections to *Sales & Marketing Management*, Subscription Service Department, P.O. Box 1025, South Eastern PA 19398-9975. Member of the Business Publications Audit of Circulations and member of the Association of Business Publishers.

Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by *Sales & Marketing Management* for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$3 per copy is paid directly to CCC, 21 Congress St., Salem, MA 01970. 0273-9313/91 \$3. This permission does not apply to the annual *Sales Manager's Budget Planner*, *Survey of Buying Power*, or *Survey of Media Markets* issues, nor does it extend to other kinds of copying, such as for general distribution, resale, advertising/promotional purposes, or creating new collective works. Special requests should be addressed to Kerry Rottenberger at *Sales & Marketing Management*.

U.S.A. Newsstand Distribution by Eastern News Distributors, Inc., 1130 Cleveland Road, Sandusky, OH 44870.

ABP **BPA**

THE RACE

CRAZY, BUT NOT INSANE



If the truth be known, our announcement last fall that we would be sponsoring POWER SELLING '91—a major conference and exposition scheduled for September 11-13, 1991, at the Hyatt Regency Chicago—didn't initially garner the kind of unanimous praise and support we had expected. Our readers—God love 'em—thought it was a great idea, witnessed by the more than 3,000 inquiries we've received so far from people wanting more information about registration, programs, etc.

What was surprising was the reaction from some of our colleagues and peers. More than a few suggested that, in light of the time and effort it would entail, we were downright insane to try to mount an event of this size and scope. Others were slightly more kind. They just said we were crazy.

As it turns out, they were only half right. After spending a good six months putting together a program that's second to none in terms of its comprehensive coverage of cutting-edge topics and trends in sales and marketing, we'll admit to being a little crazy. Given the pressures of deadlines, logistics, and other details, who wouldn't be? But insane? We never really thought of it in those terms.

Basically, we've never wavered in our belief that such a conference and expo targeted at our audience is both essential and long overdue. And now that it's all in place, even some of our less-than-optimistic brethren have come around, expressing their amazement that we've been able to pull together such an impressive program.

And what about that program? Let's start with keynoters: Desert Storm stalwart General Thomas Kelly; renegade newspaperman Allen Neuharth; bizarre cartoonist Gahan Wilson; and transactional sales guru J. Shelov.

Or how about seminars? We've put together a total of 35 informative and thought-provoking sessions covering a range of key topics in areas like sales force automation, market research, sales force management, and marketing.

Special events? We've got some real gems: An opening reception and dinner cruise aboard the *Odyssey*, Lake Michigan's newly christened world-class yacht; a gala reception and banquet honoring the winners of this year's Best Sales Force and Marketing Achievement awards; and a slate of general sessions filled to the brim with celebrities and dignitaries from the worlds of business, politics, and entertainment.

And last but not least, we've lined up an exposition of more than 100 vendors whose products and services are specifically targeted at the sales and marketing community, providing attendees with an opportunity to explore and experience the newest trends and technologies affecting their businesses.

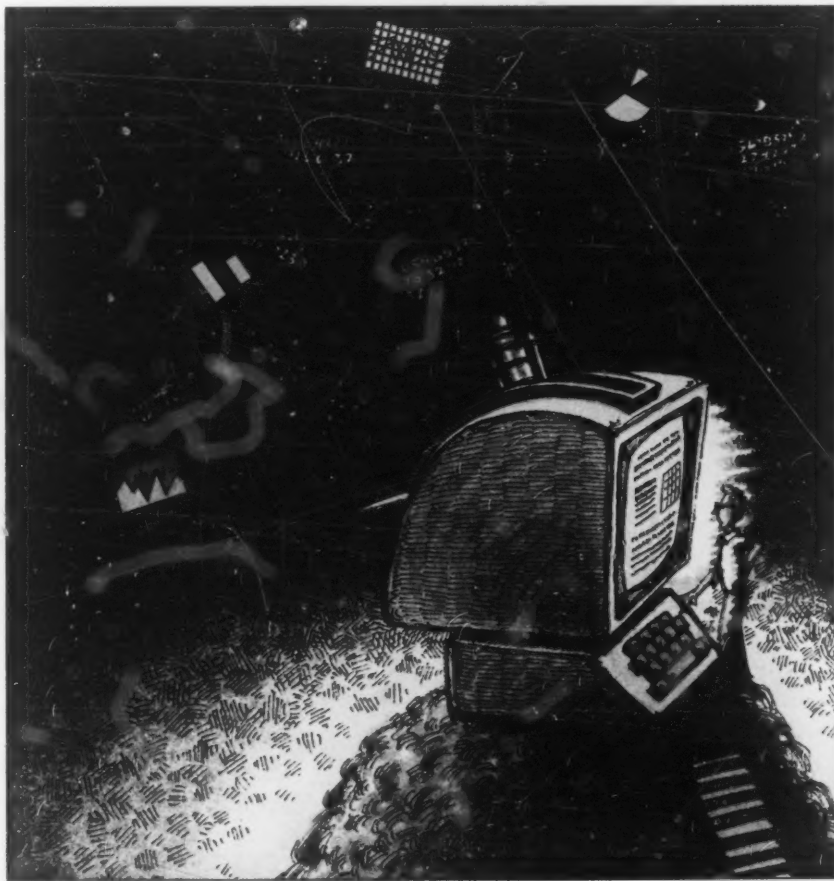
Like I said, a hell of a lot of work, but it's been more than worth it. So if you haven't yet signed up for POWER SELLING '91, check out the registration package included in this issue. I think you'll agree that we've come up with one of the most exciting (and eminently affordable) events of its kind anywhere.

Take it from somebody who knows—you'd be insane to pass up an opportunity like this.

Richard P. Kern
Editor

SPECIAL SUPPLEMENT

BUSINESS-TO-BUSINESS SELLING



**EXPLORING THE UNIVERSE
OF BUSINESS-TO-BUSINESS
INFORMATION AND
APPLICATIONS**

SUPPLEMENT EDITOR: RICHARD P. KERN

DATA-SMART PROSPECTING

Here's a look at how business-to-business data can be used to grow marketing success.

BY SAM GILBERT AND
GERALD REISBERG

The recently promoted vice president of marketing for a leading stationery supplier, Field of Reams, should have been on top of the world. Instead, as he scoured the company's financial records, he realized that he had just inherited a wealth of bad news. For one, operating margins had been flat—even declining somewhat—over the past few years. To make matters worse, the company was losing share to some of its major competitors. And topping it all off, the results of last year's direct mail campaign (accompanied by the tag line "Put Field of Reams in Your Dreams") were discouraging.

The company was in a bind—to say the least. The new marketing VP determined that the company must take a more aggressive tack in its sales and marketing efforts, the primary goal being a reduction of customer defections—while at the same time identifying and capturing new business. On the other hand, marketing dollars couldn't be spent indiscriminately, given the current economic climate. This, thought the new VP, would undoubtedly require a very well-directed and finely tuned target marketing strategy.

SELLING WITH DATA

The logical starting point for this marketer—as for any sales or market-



ing executive in a similar predicament—is to gain a detailed understanding of the number of prospects in the company's key markets, making note of their relative profitability. At the very least, he needs to quantify Field of Reams' markets in terms of 1) the number of available customers, and 2) his company's market share in relation to the total dollar value of shipments in each segment.

One starting point might be the manufacturing and service statistics contained in the tables of "U.S. Totals for 4-Digit SIC Industries" (page 62).

These statistics—as well as the more detailed state and county breakouts available on request from Dun's Marketing Services—offer a useful foundation for analyzing business-to-business market penetration, as we'll see in the following example.

From these data, the Field of Reams marketing VP determines that his 5,000 commercial printing customers represent roughly 3% of the total prospects in the U.S. market. Then, by analyzing the detailed state and county reports, he can zero in on reservoirs of untapped potential that warrant development.

But as any savvy businessperson knows, not all prospects—even those in profitable industries such as commercial printing—are created equal. The universe of sales prospects for any company is comprised of the good, the bad, and the ugly. What

Field of Reams requires at this point is a simple (yet cost-effective) "divining rod" to distinguish the precious few from the less profitable—those prospects that have put a drain on the company's growth and profitability.

A number of new database and market segmentation systems come close to perfecting this divining rod. Commercially available analytic services, such as the Dun's Market Optimizer, accomplish this objective by first overlaying business characteristic data (annual shipments, number of employees, industry classification, sales

region definitions) on Field of Reams' customer records.

From there, these programs identify the traits of the company's best customers, then locate those prospects in the business establishment universe that most closely resemble the cream of the crop. Using revenue from current customers as a guide, discrete prospect groups are then prioritized by the estimated profitability they could generate. The Field of Reams marketer could even identify prospects and compare results by individual product lines for each of his sales regions—all necessary steps in helping the company get back on the fast track.

FOCUSING ON TARGET

Most marketers tend to think that they already know the major players in their markets. But the truth—even for well-established companies—is that it's often not enough to know the names of the best customers or a few outstanding prospects. The real opportunity comes from knowing the market characteristics they share. Consider the following challenges demanding immediate answers by the marketing VP at Field of Reams:

- Is there greater potential for the company's products among small law firms in the eastern sales region than in large firms in the western region?
- Should vertical campaigns be instituted to take advantage of strength in particular retail and service industries?
- Does it make economic sense to approach marginal prospects through direct sales, or should a lower-cost telemarketing option be employed?

SUPPLEMENT HIGHLIGHT

Top 10 Manufacturing Industries

SIC	INDUSTRY	TOTAL SHIPMENTS (\$ MIL.)	TOTAL EMPLOYMENT
3714	Motor vehicle parts & accessories	\$38,978	420,132
2911	Petroleum refining	36,695	78,222
3089	Plastics products, n.e.c.	32,162	424,755
3711	Motor vehicle & passenger car bodies	29,694	274,036
3721	Aircraft manufacturing	28,808	305,082
3571	Electronic computers	28,726	162,562
2752	Commercial lithographic printing	28,296	437,871
3674	Semiconductors & related devices	24,167	209,851
2869	Industrial organic chemicals	22,559	122,623
3312	Blast furnaces & steel mills	22,473	216,685

- Is this year's catalog mailing targeting the right prospects?

Since the price tag of a face-to-face industrial sales call is fast approaching \$300—and the cost of mailing is increasing accordingly—finding the answers to questions such as these depends more than ever on the use of segmentation and targeted marketing solutions.

Using today's spate of affordable business solutions, a company like Field of Reams can piece together a variety of innovative marketing strategies. First and foremost, desktop market optimization packages can point, with unprecedented precision, to unique and profitable opportunities by segment and marketing channel. Once this is accomplished, statistical models can identify historically proven buyers

most likely to respond positively to catalog mailings. Finally, desktop mapping products can graphically display clusters of these prospects by user-specified geographies down to the county or zip code level and beyond. These packages also make the process of ordering lists for sales prospecting or mailings easier and more efficient.

These recent advances in target marketing techniques should easily enable Field of Reams to recapture its past glory, since profitable product marketing, new business development, and effective sales territory management can now be achieved with an unprecedented degree of success. Using these solutions as a springboard for growth, Field of Reams should effectively stamp out any suggestion that its days as an industry leader are over, instead filing its newfound status under "S"—as in "Success." □

Sam Gilbert is a research associate, and Gerald Reisberg vice president of advertising and communications, with Dun's Marketing Services, Parsippany, N.J.

SUPPLEMENT HIGHLIGHT

Top 10 Non-Manufacturing & Service Industries

SIC	INDUSTRY	TOTAL RECEIPTS (\$ MIL.)	TOTAL EMPLOYMENT
8062	General medical & surgical hospitals	\$207,646	4,063,768
8211	Elementary & secondary schools	184,795	5,647,937
4911	Electric services	137,454	459,143
8221	Colleges & universities	111,727	2,013,456
8011	Offices & clinics of medical doctors	93,629	1,209,948
6531	Real estate agents & managers	73,758	605,985
4813	Non-radio telephone communications	62,641	488,755
6411	Insurance agents, brokers & services	59,427	713,121
8111	Legal services	57,481	869,729
6021	National commercial banks	57,123	904,910

State and County Data

If you would like to receive additional county-level data on establishment counts, shipments/receipts, % of total U.S. shipments/receipts, and the % of shipments/receipts in large establishments, contact Dun's Marketing Services, Parsippany, N.J. Telephone: 201-605-6656.

OPPORTUNITY KNOCKS

Marketing manager Eric Docter explains the theory behind what he calls "Opportunity Marketing."

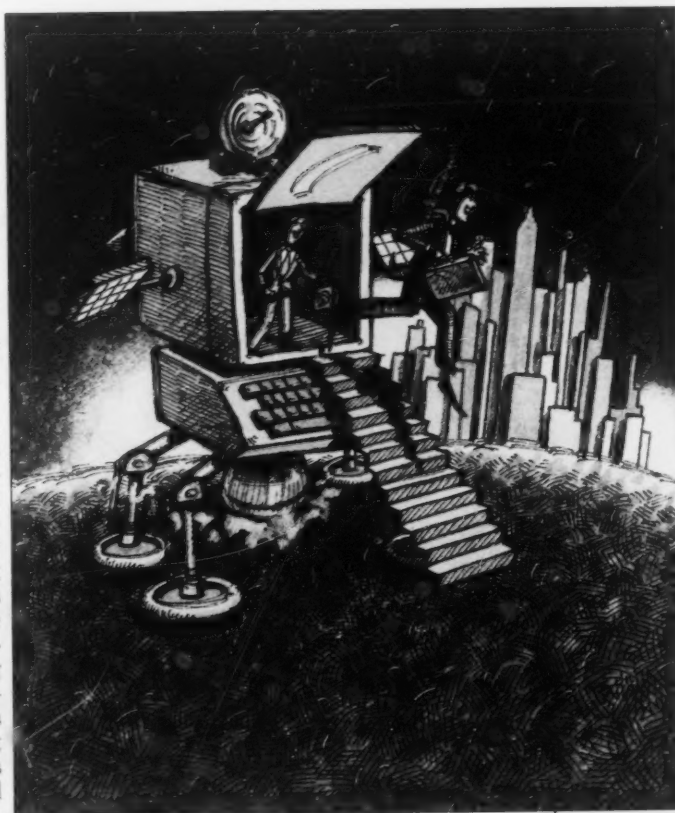
BY ERIC DOCTER

The environment in which American business operates has changed dramatically over the past decade. As a result, businesses are being forced to recognize sales and marketing automation as a companion to their forward-reaching strategic plans—generating an abundance of market and customer data in the process.

While using market and buyer intelligence is the first step in identifying sales and marketing opportunities, most companies fall short of truly optimizing their market data by neglecting sales force deployment. The net result is that companies aren't obtaining proper marketing coverage of sales territories because they're not focusing their resources on the customers and prospects who are planning to make a purchase decision.

Enter "Opportunity Marketing (OM)," a closed-loop sales and marketing process designed to use database marketing intelligence to optimize market coverage and sales force deployment. The OM process is composed of a number of interrelated components, each with a critical window on a database of shared information. This integration allows access to information that will in turn support the entire sales and marketing effort.

The sales and marketing database itself provides the basic integration,



structure, and central control for an OM program, since it's the repository for account and operational data that can be shared and analyzed by a variety of disciplines and users. Furthermore, it offers a means for organizing customer, opportunity, and marketing information in a way that's more tightly focused on overall sales and marketing effectiveness.

STARTING WITH THE DATA

Typically, the central sales and marketing database is built by selectively merging data from existing com-

pany databases and/or purchased lists. The information supplied with these lists usually includes company name and address, contact name(s), telephone number, SIC codes, and company size—either by number of employees or annual sales. And while that's a good start, companies trying to market in a business-to-business environment will need a certain amount of additional customer information in order to target more effectively.

This can be accomplished through the use of telemarketing, which adds key buyer intelligence information to the sales and marketing database. Using a telephone survey as the vehicle for data collection, accounts and prospects can be asked a predefined set of questions designed to predict buying behavior. Upon completion of

the survey, the results can then be loaded into the database for manipulation and general access.

The questions that steer this tele-survey process should be based on industry-specific research that attempts to determine which variables predict an account's inclination to make a purchase decision. These variables include generic issues like revenue growth, size, employee growth, and number of locations, but also encompass information specific to the targeted industry or product—such things as tie-ins or related products or

BUSINESS-TO-BUSINESS SELLING

services that an account might be considering. During this part of the process, answer ranges—or variances—for a particular variable can also be established.

The next step calls for the classification of variables into a predefined hierarchy—categorizing high, medium, and low sales opportunities. It should be noted that the classification of variables will be somewhat different for each account, depending on their “occupancy state” (i.e., if the account is currently a client, using a competitor’s product, or operating manually).

Once these classification “filters” have been defined, the opportunity analysis stage of the cycle begins. This basically involves analyzing the survey data and grouping accounts according to the opportunity classification model. If necessary, accounts can be further segmented into unique “opportunity sets” in order to customize marketing programs.

MATCHING OPPORTUNITY TO RESOURCES

An opportunity set is defined as a group of opportunities that have been selected from the sales and marketing database using a common set of criteria. Once established, these sets can then be used to evaluate territory potential, develop a coverage plan, or target a specific marketing program to a distinct audience.

Having the flexibility to build opportunity sets offers marketers the ability to speak directly and persuasively to their market segment. The importance of this capability increases as more information is collected through sales, telemarketing, and customer support, thereby extending a manager’s decision-support capability.

Deployment decisions, of course, are essentially resource allocation decisions. Management must decide how its limited resources (sales reps, sales calls, selling time, etc.) are to be allocated to various opportunities and territories. The challenge is to determine the specific allocation of sales resources necessary to achieve your predefined sales and profit objectives.

Before resources can be effectively deployed, however, several important issues should be addressed. The first concerns the classification of opportunities. As mentioned during the opportunity analysis stage of the marketing cycle, each surveyed account is compared to a set of opportunity criteria that classifies it by its propensity to make a purchase deci-

SUPPLEMENT HIGHLIGHT

Top 25 Counties in Manufacturing Activity

COUNTY/STATE	TOTAL SHIPMENTS (\$ MIL.)
Los Angeles, CA	\$71,271.1
Cook, IL	46,477.6
Santa Clara, CA	27,400.1
Orange, CA	23,674.5
Harris, TX	21,363.8
New York, NY	21,192.4
Dallas, TX	20,482.2
Cuyahoga, OH	16,559.7
Middlesex, MA	16,224.2
Wayne, MI	16,132.7
San Diego, CA	15,902.3
Maricopa, AZ	14,017.9
Hennepin, MN	12,993.1
Hamilton, OH	12,404.6
King, WA	12,035.7
Milwaukee, WI	10,436.3
Fairfield, CT	10,167.3
Macomb, MI	10,167.1
Baltimore, MD	10,091.8
Bergen, NJ	9,419.1
St. Louis City, MO	9,272.2
Hartford, CT	9,164.6
Tarrant, TX	9,073.2
Oakland, MI	8,738.5
Marion, IN	8,668.5

sion. Here, resources should fundamentally be deployed only to those accounts planning to make a purchase decision. These are considered "focus accounts," a subset of all opportunities.

However, calculating resource requirements on the basis of all focus accounts would produce an inflated result. Another screen that can be used to reduce the focus accounts to a smaller target group is something we call "solution availability and fit"—simply, which prospects are we most likely to satisfy with our specific product or service? Prospects interested in tying in additional products or services that you can't provide are less likely to buy from you and can probably be screened out at this time. The group that remains is termed the "base opportunity," a further subset of the focus accounts.

Once the base opportunity group has been identified, a company can determine its account resource requirements. Obviously, no two salespeople have identical skills, and every industry segment requires different levels of effort deployment. In addition, if a salesperson is dedicated to one account, then you must also assess how each account is likely to respond to different levels of call activity. External resources such as business partners, affiliates, and strategic alliances should also be considered when calculating resource requirements and deployment strategies.

The goal here is to determine the current and required sales resource levels needed to provide total coverage of "available opportunity accounts." When viewed from a geographic perspective, this same information can be used for organizing sales territories.

In a nutshell, Opportunity Marketing allows companies to develop programs that pinpoint specific groups of homogeneous accounts through a selected set of parameters, which in turn lets them effectively deploy sales resources in a timely manner to cover those accounts. As a result, companies are not only able to be more selective in the type of communication used to reach those potential customers, they can also be more customized and precise with their actual message. And after all, that's what database marketing is really all about—seizing opportunities. □

Eric Docter is marketing manager for Brock Control Systems, a provider of sales and marketing information systems based in Atlanta, Ga.

SUPPLEMENT HIGHLIGHT

Top 25 Counties in Non-Manufacturing & Service Activity

COUNTY/STATE	TOTAL RECEIPTS (\$ MIL.)
Los Angeles, CA	\$104,239.9
New York, NY	88,038.0
Cook, IL	78,314.6
Harris, TX	45,650.5
Dallas, TX	36,182.1
Orange, CA	28,894.0
Fulton, GA	26,188.9
Dade, FL	24,963.0
Philadelphia, PA	24,228.7
Maricopa, AZ	24,107.2
Washington, DC	23,610.9
King, WA	23,491.3
Hennepin, MN	22,858.5
San Francisco, CA	22,093.1
Suffolk, MA	21,929.4
Wayne, MI	21,719.2
San Diego, CA	20,759.2
Hartford, CT	19,414.1
Allegheny, PA	18,774.7
Middlesex, MA	18,724.8
Cuyahoga, OH	18,417.1
Baltimore, MD	17,898.0
Nassau, NY	16,277.6
Franklin, OH	16,006.6
Santa Clara, CA	15,919.6

DATA SUPPLEMENT: U.S. TOTALS FOR 4-DIGIT SIC INDUSTRIES

A statistical overview of the nation's economic output, showing establishment, employment, and shipment/receipt totals for more than 700 individual industries.

A. The 2-digit and 4-digit Standard Industrial Classification (SIC) codes listed here conform to the January 1987 revisions to the SIC system. Briefly, this system was developed to facilitate the collection and dissemination of data pertaining to all business and industrial activity in the U.S. The 2-digit level of detail, commonly referred to as **Major Groups**, describes general manufacturing (Major Groups 20 through 39) and non-manufacturing categories (Major Groups 40-49; 60-67; 70-79; and 80-89). For each Major Group, a number of 4-digit SIC designations, called **Specific Industries**, are listed, along with their industry definitions. These describe the various types of industrial activity that make up the larger Major Group designation.

B. The **Total Establishments** figure shows the number of all business establishments in this particular 4-digit industry.

C. **Large Establishments** are defined as those with 100 or more employees, and this figure can be used to ascertain the number of "key prospects" in any given industry. This is because larger establishments tend to account for a majority of all activity in a specific 4-digit category, as evidenced by the "% in Large Establishments" figure in column F.

		A		B		C		D		E		F	
1990 ESTIMATE													
SIC	Industry	Establishments		Employment	Shipments Receipts (\$ MIL.)	% in Large Estab.							
		Total	Large										
MANUFACTURING													
SIC 20 FOOD													
2011	Meat-packing plants	2,293	255	150,214	17,143.2	83							
2013	Sausages & other prepared meats	1,509	168	67,737	8,341.9	65							
2015	Poultry slaughtering & processing	605	284	161,630	20,540.1	95							
2021	Creamery butter	88	10	4,104	2,158.6	57							

D. The **Employment** figure shows total U.S. employment for all establishments in each 4-digit industry.

E. The **Shipments/Receipts** figure, shown here in millions of dollars, records the dollar value of all goods produced (in manufacturing industries) or services rendered (in non-manufacturing and service industries). The term "Shipments" is commonly used in manufacturing, while "Receipts" pertains to non-manufacturing industries.

F. The portion of a 4-digit industry's Shipments/Receipts generated by the number of Large Establishments shown in column C is listed here under the heading of **% in Large Establishments**. This figure immediately tells you what percentage of an industry's

total business volume is accounted for by establishments employing 100 or more people, allowing you to concentrate your selling efforts more efficiently.

State and County Data

If you would like to receive additional county-level data on establishment counts, shipments receipts, % of total U.S. shipments/receipts, and the % of shipments/receipts in large establishments, contact Dun's Marketing Services, Parsippany, N.J. Telephone: 201-605-6656.

1990 ESTIMATE							1990 ESTIMATE						
SIC	Industry	Establishments		Employment	Shipments Receipts (\$ Mil.)	% In Large Estab.	SIC	Industry	Establishments		Employment	Shipments Receipts (\$ Mil.)	% In Large Estab.
		Total	Large						Total	Large			
MANUFACTURING													
SIC 20 FOOD													
2011	Meat-packing plants	2,293	255	150,214	17,143.2	83	2321	Men's & boys' shirts	861	210	70,461	3,405.6	82
2013	Sausages & other prepared meats	1,509	168	67,737	8,341.9	65	2322	Men's & boys' underwear & nightwear	125	51	23,388	1,364.3	93
2015	Poultry slaughtering & processing	605	284	161,630	20,540.1	95	2323	Men's & boys' neckwear	253	25	9,605	763.1	56
2021	Creamery butter	88	10	4,104	2,158.6	57	2325	Men's & boys' trousers & slacks	549	252	84,319	2,682.9	91
2022	Natural & processed cheese	699	94	40,307	10,629.0	66	2326	Men's & boys' work clothing	370	130	37,872	2,312.8	84
2023	Dry, condensed, etc., dairy products	203	27	12,179	3,937.3	65	2329	Men's & boys' clothing n.e.c.	1,683	235	79,680	3,984.0	66
2024	Ice cream & frozen desserts	738	72	23,544	2,283.1	57	2331	Women's & misses' blouses & shirts	1,503	139	50,348	2,013.9	53
2026	Fluid milk	900	232	58,869	12,598.6	74	2335	Women's & misses' dresses	2,369	124	63,729	3,641.7	37
2032	Canned specialties	334	58	32,330	3,212.7	88	2337	Women's & misses' suits & coats	885	87	32,641	1,305.6	44
2033	Canned fruits & vegetables	961	184	71,114	11,537.2	79	2339	Women's & misses' outerwear n.e.c.	3,738	399	141,040	10,578.0	60
2034	Dehydrated fruits, vegetables & soups	211	37	19,047	3,135.2	84	2341	Women's & children's underwear	715	202	64,556	4,517.5	82
2035	Pickles, sauces & salad dressings	548	61	21,416	2,469.9	71	2342	Brossieres, girdles & allied garments	176	56	18,840	1,335.3	85
2037	Frozen fruits & vegetables	284	91	34,274	4,815.9	86	2353	Hats, caps & millinery	520	50	18,454	944.8	60
2038	Frozen food specialties n.e.c.	561	116	52,809	4,237.1	84	2361	Girls' & children's dresses & blouses	751	89	28,739	1,954.5	63
2041	Flour & other grain-mill products	503	59	22,207	3,884.8	64	2369	Girls' & children's outerwear n.e.c.	622	100	33,335	2,800.7	76
2043	Cereal breakfast foods	89	33	22,613	2,787.2	94	2371	Fur goods	477	1	2,256	408.5	4
2044	Rice milling	86	21	5,431	1,674.7	71	2381	Fabric dress & work gloves	114	19	6,659	333.0	62
2045	Prepared flour mixes & doughs	177	25	9,392	1,152.8	67	2384	Robes & dressing gowns	126	25	8,772	365.5	81
2046	Wet corn milling	83	22	8,865	2,231.3	86	2385	Waterproof outerwear	129	20	7,464	398.8	73
2047	Dog & cat food	248	47	16,341	2,358.8	79	2386	Leather- & sheep-lined clothing	313	8	4,892	596.2	28
2048	Prepared feeds n.e.c.	1,975	55	42,138	8,581.4	30	2387	Apparel belts	378	24	10,101	759.1	41
2051	Bread, cake & related products	3,200	442	167,197	9,061.1	74	2389	Apparel & accessories n.e.c.	532	33	14,343	844.3	52
2052	Cookies & crackers	586	92	47,099	3,399.8	84	2391	Curtains & draperies	1,896	54	29,927	1,095.1	50
2053	Frozen bakery products, except bread	80	22	8,008	671.7	85	2392	Housefurnishings	1,465	122	49,059	2,733.8	63
2061	Cane sugar, except refining	52	18	5,848	1,458.5	83	2393	Textile bags	416	25	12,483	703.8	44
2062	Cane sugar refining	42	19	9,620	3,839.5	96	2394	Canvas & related products	2,021	17	19,186	1,017.5	17
2063	Beet sugar	70	28	8,302	1,931.0	82	2395	Plating, stitching & tucking	1,195	27	15,721	692.2	30
2064	Candy & other confectionery products	1,206	103	41,712	2,307.1	69	2396	Automotive & apparel trimmings	1,912	64	31,874	1,915.1	46
2066	Chocolate & cocoa products	269	28	15,746	1,401.8	78	2397	Shiffi-machine embroideries	221	6	3,763	212.0	39
2067	Chewing gum	24	17	8,231	1,380.2	99	2399	Fabricated textile products	1,142	81	29,610	1,684.9	57
2068	Salted & roasted nuts & seeds	98	15	5,565	873.0	68	SIC 24 LUMBER & WOOD PRODUCTS						
2074	Cottonseed oil mills	53	8	3,246	959.2	45	2411	Logging	7,464	24	52,524	4,118.3	8
2075	Soybean oil mills	111	19	5,522	376.5	58	2421	General sawmills & planing mills	5,178	361	156,975	12,452.4	51
2076	Vegetable oil mills n.e.c.	49	3	1,765	441.3	55	2426	Hardware dimensions & flooring mills	1,199	94	37,316	2,246.4	45
2077	Animal & marine fats & oils	294	8	6,427	736.2	16	2429	Special-product sawmills n.e.c.	276	5	3,301	270.5	25
2079	Edible fats & oils n.e.c.	132	42	10,602	4,365.0	78	2431	Millwork	5,395	191	115,964	8,849.0	44
2082	Malt beverages	206	42	36,292	3,966.4	93	2434	Wood kitchen cabinets	6,358	123	72,486	4,112.5	37
2083	Malt	32	4	1,373	480.0	38	2435	Hardwood veneer & plywood	401	95	32,325	2,740.5	73
2084	Wines, brandy & brandy spirits	914	16	13,076	1,303.2	35	2436	Softwood veneer & plywood	165	61	26,018	3,336.4	88
2085	Distilled & blended liquors	128	26	10,131	3,584.7	77	2439	Structural wood members n.e.c.	1,045	36	24,233	1,984.0	23
2086	Bottled & canned soft drinks	1,773	237	91,207	12,816.2	54	2441	Nailed & lock-corner wood boxes	393	7	5,753	328.4	15
2087	Flavoring extracts & syrups n.e.c.	502	24	17,867	2,909.9	59	2448	Wood pallets & skids	1,988	16	27,783	1,695.8	7
2091	Canned & cured fish & seafoods	344	48	22,582	3,327.1	75	2449	Wood containers n.e.c.	508	22	9,519	516.1	41
2092	Fresh or frozen prepared fish	630	76	28,413	4,098.0	63	2451	Mobile homes	459	173	40,291	4,192.2	82
2095	Roasted coffee	228	39	12,682	2,005.7	72	2452	Prefabricated wood buildings	1,121	64	29,203	3,411.6	51
2096	Potato chips & similar snacks	363	81	30,886	2,559.1	80	2491	Wood preserving	603	22	12,972	1,968.8	24
2097	Manufactured ice	819	0	6,069	386.1	0	2493	Reconstituted wood products	331	65	18,894	1,688.8	75
2098	Macaroni & spaghetti	292	27	9,571	712.7	61	2499	Wood products n.e.c.	3,905	105	58,334	2,866.8	40
2099	Food preparations n.e.c.	2,362	202	81,973	7,283.8	59	SIC 25 FURNITURE						
SIC 21 TOBACCO													
2111	Cigarettes	53	19	34,095	9,553.6	98	2511	Unupholstered wood household furniture	4,271	279	128,408	6,808.6	68
2121	Cigars	54	5	2,567	126.4	57	2512	Upholstered household furniture	1,857	245	100,333	5,523.6	73
2131	Chewing & smoking tobacco & snuff	63	9	3,633	573.1	69	2514	Metal household furniture	546	70	25,250	1,979.8	70
2141	Tobacco stemming & redrying	33	8	3,544	469.0	80	2515	Mattresses & bedsprings	1,090	71	29,288	2,326.0	39
SIC 22 TEXTILE-MILL PRODUCTS													
2211	Cotton-weaving mills	1,373	159	77,262	4,763.1	79	2517	Wood TV & radio cabinets	129	24	7,784	478.2	82
2221	Synthetics & silk-weaving mills	939	157	68,251	4,824.7	85	2519	Household furniture n.e.c.	661	31	15,944	1,077.7	57
2231	Wool-fabric weaving & finishing mills	281	42	18,054	1,507.4	74	2521	Wood office furniture	1,429	101	45,861	2,894.8	59
2241	Narrow-fabric weaving & braiding mills	610	47	20,727	1,498.4	44	2522	Office furniture, except wood	491	92	45,238	4,105.4	83
2251	Women's hosiery, except socks	232	74	33,632	2,140.3	89	2531	Public building & related furniture	637	89	31,032	2,104.8	71
2252	Hosiery n.e.c.	506	98	35,855	1,980.7	74	2541	Wood partitions & fixtures	2,690	76	44,894	2,936.1	32
2253	Knit outerwear mills	1,676	225	95,804	9,024.2	73	2542	Partitions & fixtures	1,165	125	47,547	3,954.5	61
2254	Knit underwear mills	121	51	29,771	1,673.2	94	2591	Drapery hardware & blinds & shades	982	51	27,143	1,924.2	60
2257	Wet knit fabric mills	198	47	14,490	1,729.4	73	2599	Furniture & fixtures n.e.c.	904	41	24,547	1,692.0	52
2258	Lace & warp knit fabric mills	256	50	17,307	1,951.6	75	SIC 26 PAPER						
2259	Knitting mills n.e.c.	106	11	6,805	399.2	76	2611	Pulp mills	226	44	15,386	2,767.6	83
2261	Cotton-finishing plants	1,247	82	33,662	2,092.7	62	2621	Paper mills	1,265	273	139,362	19,973.1	82
2262	Synthetics & silk-finishing plants	639	28	12,072	786.2	39	2631	Paperboard mills	681	155	57,278	6,890.0	70
2269	Textile-finishing n.e.c.	260	29	11,775	854.1	62	2632	Setup paperboard boxes	267	42	14,728	947.7	51
2273	Carpets & rugs	908	135	71,368	8,724.7	84	2653	Corrugated & solid fiber boxes	1,975	485	118,812	12,946.5	62
2281	Yarn-spinning mills	419	218	73,741	5,454.5	93	2655	Fiber cans, drums & tubes	369	45	17,991	1,555.7	50
2282	Yarn-throwing & winding mills	157	44	19,171	1,795.1	86	2656	Sanitary food containers	118	41	14,521	1,989.8	85
2284	Thread mills	113	30	9,160	895.4	88	2657	Folding paperboard boxes	229	60	15,763	1,563.6	67
2295	Coated fabrics, not rubberized	264	34	14,462	1,695.9	65	2671	Coated & laminated packaging paper	253	50	16,044	2,213.3	68
2296	Tire cord & fabrics	28	18	8,110	710.7	98	2672	Coated & laminated paper n.e.c.	674	83	57,247	6,599.9	80
2297	Nonwoven fabrics	93	23	6,900	821.2	74	2673	Plastics, foil & coated paper bags	562	75	29,355	3,765.3	62
2298	Cordage & twine	300	20	8,177	628.6	44	2674	Uncoated paper & multiwall bags	158	43	12,753	1,602.3	63
2299	Textile goods n.e.c.	514	71	28,809	2,784.3	70	2675	Die-cut paper & board	343	31	12,731	932.5	63
SIC 23 APPAREL													
2311	Men's & boys' suits & coats	636	164	60,995	5,187.4	87	2676	Sanitary paper products	139	54	22,648	3,386.0	91

BUSINESS-TO-BUSINESS SELLING

1990 ESTIMATE						1990 ESTIMATE					
SIC	Industry	Establishments		Employment	% In Large Estab.	SIC	Industry	Establishments		Employment	% In Large Estab.
		Total	Large					Total	Large		
SIC 27 PRINTING & PUBLISHING						SIC 32 GLASS, CLAY, GLASS & CONCRETE					
2711	Newspapers	11,059	882	495,053	19,316.0	3221	Glass containers	160	81	40,790	4,334.0
2721	Periodicals	6,795	170	119,032	11,901.5	3229	Pressed & blown glass n.e.c.	861	78	49,120	2,886.2
2731	Book publishing	5,105	192	118,020	10,188.4	3231	Products of purchased glass	2,282	115	51,108	2,935.1
2732	Book printing	432	57	25,914	1,993.5	3241	Hydraulic cement	318	99	24,519	4,076.5
2741	Miscellaneous publishing	5,439	128	72,705	5,473.2	3251	Brick & structural clay tile	316	47	15,588	1,070.3
2752	Commercial lithographic printing	36,501	572	437,871	28,295.7	3253	Ceramic wall & floor tile	235	36	13,046	848.1
2754	Commercial gravure printing	945	39	20,462	1,484.9	3255	Clay refractories	243	28	10,211	948.7
2759	Commercial printing n.e.c.	13,299	197	140,776	7,677.9	3259	Structural clay products n.e.c.	78	6	1,743	135.8
2761	Manifold business forms	869	114	40,609	4,323.6	3261	Vitreous plumbing fixtures	102	21	8,986	721.8
2771	Greeting cards	403	26	23,297	1,500.5	3262	Vitreous china table & kitchen articles	46	12	6,417	274.5
2782	Blankbooks & looseleaf binders	621	110	36,194	2,453.6	3263	Semivitreous tableware & kitchenware	45	5	3,423	194.4
2789	Bookbinding & related work	1,253	55	26,661	1,152.8	3264	Porcelain electric supplies	115	34	11,156	830.5
2791	Typesetting	4,393	35	36,857	1,604.6	3269	Pottery products n.e.c.	1,297	32	15,594	493.1
2796	Platemaking & related services	1,159	36	23,058	1,561.4	3271	Concrete block & brick	1,017	16	18,688	1,991.5
SIC 28 CHEMICALS						3272	Concrete products, except block & brick	4,004	160	77,142	5,740.5
2812	Alkalies & chlorine	108	16	8,702	2,208.8	3273	Ready-mixed concrete	4,866	99	80,498	9,385.0
2813	Industrial gases	627	12	14,722	1,874.6	3274	Lime	111	12	3,806	425.4
2816	Inorganic pigments	129	8	5,359	1,055.9	3275	Gypsum products	198	67	15,510	1,922.2
2819	Industrial inorganic chemicals	1,758	109	73,516	12,123.4	3281	Cut stone & stone products	1,790	12	13,965	911.8
2821	Plastics materials & synthetic resins	1,490	176	87,859	12,761.3	3291	Abrasive products	497	38	23,673	2,103.2
2822	Synthetic rubber	185	31	12,525	1,542.1	3292	Asbestos products	153	21	7,452	752.3
2823	Cellulosic manmade fibers	35	8	4,843	605.2	3295	Ground or treated minerals & earths	442	21	10,902	1,348.3
2824	Manmade organic fibers	147	40	28,997	3,720.4	3296	Mineral wool	330	47	22,012	2,126.4
2833	Medicinals & botanicals	448	35	19,284	2,681.7	3297	Nonclay refractories	196	24	7,782	1,101.0
2834	Pharmaceutical preparations	1,491	267	153,345	20,381.9	3299	Nonmetallic mineral products n.e.c.	632	11	8,449	481.6
2835	Diagnostic substances	152	9	5,180	485.3	SIC 33 PRIMARY METAL					
2836	Nondiagnostic biological products	277	16	8,765	794.3	3312	Steel works, blast furnaces & rolling mills	2,146	247	216,685	22,472.6
2841	Soap & other detergents	639	49	31,780	3,539.0	3313	Electrometallurgical products	89	18	7,204	1,916.9
2842	Polishes & sanitary products	1,845	41	35,546	5,694.1	3315	Steel wiredrawing & steel nails & spikes	514	63	23,473	2,674.8
2843	Surface active agents	171	8	3,908	676.1	3316	Cold-rolled steel sheet, strip & bars	304	39	16,902	3,326.2
2844	Toilet preparations	1,635	113	65,235	7,990.7	3317	Steel pipe & tubes	336	66	19,811	3,038.7
2851	Paints & allied products	1,814	158	65,072	8,656.2	3321	Gray & ductile iron foundries	780	193	88,131	6,265.5
2861	Gum & wood chemicals	120	12	5,049	680.6	3322	Malleable iron foundries	58	17	6,885	502.7
2865	Cyclic crudes & intermediates	288	51	21,851	4,355.7	3324	Steel investment foundries	105	31	16,831	1,022.7
2869	Industrial organic chemicals n.e.c.	1,074	180	122,623	22,558.6	3325	Steel foundries n.e.c.	352	74	34,950	2,934.4
2873	Nitrogenous fertilizers	478	15	9,670	1,897.2	3331	Primary smelting & refining of copper	20	9	4,245	663.7
2874	Phosphatic fertilizers	196	8	3,895	962.3	3334	Primary production of aluminum	83	26	23,650	5,819.8
2875	Fertilizers, mixing only	453	3	4,976	983.2	3339	Primary nonferrous metals n.e.c.	246	36	12,766	4,360.6
2879	Agricultural chemicals n.e.c.	581	43	25,281	4,311.2	3341	Secondary nonferrous metals	576	21	14,112	3,754.1
2891	Adhesives & sealants	995	27	21,523	3,082.8	3351	Copper rolling, drawing & extruding	222	82	27,644	4,467.0
2892	Explosives	186	13	7,655	988.8	3353	Aluminum sheet, plate & foil	158	40	23,076	3,450.9
2893	Printing ink	582	3	10,516	1,438.6	3354	Aluminum extruded products	287	95	37,420	4,613.7
2895	Carbon black	35	0	1,223	168.4	3355	Aluminum rolling & drawing n.e.c.	117	27	12,746	1,829.3
2899	Chemical preparations n.e.c.	2,180	60	49,621	6,296.2	3356	Nonferrous rolling, drawing & extruding	275	42	16,811	2,951.8
SIC 29 PETROLEUM REFINING & COAL PRODUCTS						3357	Nonferrous wiredrawing & insulating	471	127	58,309	7,018.8
2911	Petroleum refining	1,445	146	78,222	36,695.1	3363	Aluminum die-castings	504	56	23,071	1,678.5
2951	Asphalt paving mixtures & blocks	917	20	13,902	3,446.6	3364	Nonferrous die-castings	342	21	15,973	1,269.1
2952	Asphalt felts & coatings	351	46	12,822	2,176.6	3365	Aluminum foundries	655	52	20,778	1,383.3
2992	Lubricating oils & greases	620	30	14,572	2,495.1	3366	Copper foundries	466	15	10,159	650.8
2999	Petroleum & coal products n.e.c.	55	4	1,553	353.9	3369	Nonferrous foundries	422	21	16,748	1,156.9
SIC 30 RUBBER & MISCELLANEOUS PLASTICS						3398	Metal heat treating	732	17	15,611	1,059.1
3011	Tires & inner tubes	274	85	81,055	9,891.1	3399	Primary metal products n.e.c.	307	31	15,392	1,705.1
3021	Rubber & plastics footwear	110	35	14,570	922.8	SIC 34 FABRICATED METAL					
3052	Rubber & plastics hose & belting	330	69	29,175	3,143.6	3411	Metal cans	430	174	52,107	7,256.6
3053	Gaskets, packing & sealing devices	629	74	35,081	3,063.2	3412	Metal shipping barrels, drums & pails	177	28	8,505	981.7
3061	Mechanical rubber goods	193	39	12,578	889.4	3421	Cutlery	240	27	10,230	681.2
3069	Fabricated rubber products n.e.c.	2,204	295	117,635	9,897.5	3423	Hand & edge tools	1,014	92	36,048	2,504.6
3081	Unsupported plastics film & sheets	891	165	52,915	6,890.2	3425	Saw blades & handsaws	190	23	7,717	538.2
3082	Unsupported plastics profile shapes	251	27	9,594	797.9	3429	Hardware n.e.c.	1,937	199	89,941	7,523.5
3083	Laminated plastics plate & sheet	627	65	25,282	2,051.9	3431	Enameled iron & metal sanitary ware	180	18	10,224	880.4
3084	Plastics pipe	304	35	15,238	2,594.8	3432	Plumbing fixture fittings & trim	305	43	16,174	1,806.8
3085	Plastics bottles	275	67	20,253	2,259.8	3433	Heating equipment, except electric	800	41	21,812	1,972.2
3086	Plastics foam products	1,175	116	47,469	4,988.5	3441	Fabricated structural metal	4,313	121	94,222	8,530.7
3087	Custom compounding of resins	110	8	3,515	486.8	3442	Metal doors, sash & trim	2,474	185	81,978	6,524.3
3088	Plastics plumbing fixtures	331	36	12,545	1,104.7	3443	Fabricated plate work [boiler shops]	2,486	202	97,157	9,019.6
3089	Plastics products n.e.c.	10,006	1,213	424,755	32,161.6	3444	Sheet metal work	4,938	121	99,792	7,630.3
SIC 31 LEATHER						3446	Architectural & ornamental metal work	3,060	39	33,479	2,216.5
3111	Leather tanning & finishing	539	40	17,343	2,333.7	3448	Prefabricated metal buildings	1,011	60	26,179	2,803.1
3131	Boot & shoe cut stock & findings	159	15	6,325	385.5	3449	Miscellaneous structural metal work	421	18	9,119	940.3
3142	House slippers	46	12	3,713	231.5	3451	Screw machine products	1,736	54	40,641	2,479.9
3143	Men's nonathletic footwear	289	110	47,815	2,977.9	3452	Bolts, nuts, screws, rivets & washers	903	98	41,700	4,049.7
3144	Women's nonathletic footwear	154	47	16,704	1,147.6	3462	Iron & steel forgings	660	106	41,481	3,772.5
3149	Nonrubber footwear n.e.c.	171	42	14,061	1,020.7	3463	Nonferrous forgings	134	21	11,483	1,181.1
3151	Leather gloves & mittens	78	12	3,503	159.0	3465	Automotive stampings	639	178	111,126	11,742.6
3161	Luggage	448	41	14,649	844.0	3466	Crowns & closures	49	16	5,197	548.4
3171	Women's handbags & purses	409	25	10,242	622.6	3469	Metal stampings n.e.c.	3,609	282	131,043	9,698.9
3172	Personal leather goods	441	27	11,048	532.4	3471	Plating & polishing	3,766	122	78,213	4,103.4
3199	Leather goods n.e.c.	805	15	8,724	362.9	3479	Metal coating & allied services n.e.c.	2,431	91	55,325	3,133.6
SIC 32 STONE, CLAY, GLASS & CONCRETE						3482	Small arms ammunition	169	14	13,495	819.4
3211	Flat glass	573	36	14,750	1,233.0	3483	Ammunition, except small arms	113	45	38,790	4,171.4

1990 ESTIMATE

SIC	Industry	Establishments		Employment	Shipments		% In Large Estab.
		Total	Large		Receipts (\$ Mil.)	Large	
3484	Small arms	304	25	24,024	1,667.9	87	
3489	Ordnance & accessories n.e.c.	115	23	19,951	1,995.7	94	
3491	Industrial valves	436	89	30,717	3,184.3	79	
3492	Fluid power valves & hose fittings	214	36	11,735	1,203.8	70	
3493	Steel springs, except wire	311	29	11,915	869.8	54	
3494	Valve & pipe fittings n.e.c.	835	148	73,645	7,404.2	81	
3495	Wire springs	319	31	11,996	784.2	44	
3496	Misc. fabricated wire products	1,541	137	52,848	4,169.9	51	
3497	Metal foil & leaf	81	17	5,239	635.0	79	
3498	Fabricated pipe & fittings	722	66	27,607	2,395.6	56	
3499	Fabricated metal products n.e.c.	1,724	78	42,436	3,016.1	49	

SIC 35 INDUSTRIAL MACHINERY & EQUIPMENT

3511	Turbines & turbine generator sets	255	44	49,013	7,185.0	92	
3519	Internal combustion engines n.e.c.	494	59	46,954	4,331.0	90	
3523	Farm machinery & equipment	2,602	97	74,737	6,042.7	58	
3524	Lawn & garden equipment	312	42	19,818	2,324.8	79	
3531	Construction machinery & equip.	1,677	121	74,079	8,039.6	70	
3532	Mining machinery & equipment	583	40	17,355	1,753.6	51	
3533	Oil & gas field machinery	1,211	79	35,862	3,427.3	58	
3534	Elevators & moving stairways	258	24	11,896	1,092.9	60	
3535	Conveyors & conveying equipment	1,055	63	30,927	3,450.3	37	
3536	Hoists, cranes & monorails	356	21	11,005	1,324.5	52	
3537	Industrial trucks & tractors	779	47	29,378	2,758.5	55	
3541	Metal-cutting machine tools	1,961	76	47,096	3,504.5	43	
3542	Metal-forming machine tools	902	35	21,174	1,646.0	36	
3543	Industrial patterns	903	2	8,018	437.2	9	
3544	Special dies & tools, jigs & fixtures	7,925	65	107,840	6,689.5	12	
3545	Machine tool accessories	2,800	82	59,854	4,038.2	30	
3546	Power-driven handtools	325	41	18,611	1,889.1	79	
3547	Rolling mill machinery & equipment	116	10	3,741	429.4	49	
3548	Electric & gas welding equipment	357	27	15,538	1,582.7	65	
3549	Metalworking machinery n.e.c.	492	13	10,928	1,019.0	24	
3552	Textile machinery	810	39	19,870	1,572.5	42	
3553	Woodworking machinery	470	18	10,597	931.6	38	
3554	Paper industries machinery	411	70	25,877	2,660.1	73	
3555	Printing trades machinery & equip.	1,036	77	36,918	3,211.0	60	
3556	Food products machinery	984	88	31,107	3,321.6	53	
3559	Special industry machinery n.e.c.	2,266	164	78,247	8,292.9	56	
3561	Pumps & pumping equipment	870	118	47,004	5,132.5	73	
3562	Ball & roller bearings	315	93	39,941	3,985.1	90	
3563	Air & gas compressors	423	49	17,128	2,052.9	64	
3564	Industrial & commercial fans & blowers	938	68	28,759	3,069.9	46	
3565	Packaging machinery	654	55	22,975	2,208.9	49	
3566	Speed changers, drives & gears	279	39	14,882	1,139.1	60	
3567	Industrial-process furnaces & ovens	738	58	24,418	2,653.9	47	
3568	Power-transmission equipment n.e.c.	310	37	16,509	1,567.1	62	
3569	General industrial machinery n.e.c.	1,688	116	57,924	6,135.4	53	
3571	Electronic computers	1,494	181	162,562	28,726.0	86	
3572	Computer storage devices	498	74	34,705	7,072.4	78	
3573	Computer terminals	420	38	21,499	3,858.2	72	
3577	Computer peripheral equip. n.e.c.	2,282	127	84,823	13,031.8	60	
3578	Calculating & accounting equipment	283	17	14,201	1,558.0	72	
3579	Office machines n.e.c.	446	43	34,656	3,305.6	79	
3581	Automatic vending machines	180	22	10,690	1,069.0	82	
3582	Commercial laundry equipment	159	15	5,990	547.5	65	
3585	Refrigeration & heating equipment	1,517	275	126,568	13,929.2	83	
3586	Measuring & dispensing pumps	101	17	6,806	648.8	85	
3589	Service industry machinery n.e.c.	1,937	128	56,028	7,026.2	56	
3592	Carburetors, pistons, rings & valves	244	45	18,475	1,360.7	84	
3593	Fluid power cylinders & actuators	189	19	7,834	594.7	56	
3594	Fluid power pumps & motors	207	31	11,148	1,206.1	73	
3596	Scales & balances, except laundry	218	15	6,199	582.9	55	
3599	Industrial machinery n.e.c.	29,451	165	277,850	16,015.6	12	

SIC 36 ELECTRONIC & OTHER ELECTRIC EQUIPMENT

3612	Nonelectric transformers	633	92	40,603	3,265.9	70	
3613	Switchgear & switchboard apparatus	1,108	99	41,906	3,743.9	63	
3621	Motors & generators	1,003	165	77,903	6,661.4	78	
3624	Carbon & graphite products	105	18	6,576	667.1	63	
3625	Resistors & industrial controls	1,671	147	74,587	6,633.0	67	
3629	Electrical industrial apparatus n.e.c.	363	31	18,443	1,769.1	67	
3631	Household cooking equipment	141	39	28,968	4,915.8	95	
3632	Household refrigerators & freezers	54	20	21,511	3,108.7	97	
3633	Household laundry equipment	48	13	21,799	1,931.6	98	
3634	Electric housewares & fans	396	75	28,908	4,413.6	84	
3635	Household vacuum cleaners	131	17	11,552	1,179.5	84	
3639	Household appliances n.e.c.	185	21	11,746	977.0	81	
3641	Electric lamp bulbs & tubes	319	62	28,059	2,360.0	87	
3643	Current-carrying wiring devices	654	158	51,419	4,115.1	78	
3644	Noncurrent-carrying wiring devices	278	61	21,302	1,825.4	76	
3645	Residential electric lighting fixtures	869	83	31,668	2,768.5	64	
3646	Commercial electric lighting fixtures	480	53	22,856	2,440.7	65	
3647	Vehicular lighting equipment	151	31	12,631	1,054.9	80	
3648	Lighting equipment n.e.c.	614	53	23,129	2,309.2	65	
3651	Household audio & video equip.	1,063	55	34,183	3,857.6	57	

1990 ESTIMATE

SIC	Industry	Establishments		Employment	Shipments		% In Large Estab.
		Total	Large		Receipts (\$ Mil.)	Large	
3652	Prerecorded records & tapes	1,057	22	14,644	1,358.7	42	
3661	Telephone & telegraph equipment	1,218	162	100,945	13,194.8	79	
3663	Radio & TV communications equip.	1,845	190	139,575	14,927.0	78	
3669	Communications equipment n.e.c.	942	64	44,243	4,385.6	73	
3671	Electron tubes	141	27	22,032	1,677.3	90	
3672	Printed circuit boards	1,822	175	78,828	5,525.1	53	
3674	Semiconductors & related devices	1,725	274	209,851	24,166.7	87	
3675	Electric capacitors	166	52	24,847	1,512.4	87	
3676	Electronic resistors	84	20	7,833	430.0	76	
3677	Electronic coils & transformers	476	52	20,859	1,185.3	52	
3678	Electronic connectors	242	51	19,970	1,870.8	80	
3679	Electronic components n.e.c.	3,382	394	205,573	15,253.5	72	
3691	Storage batteries	294	65	21,704	2,284.8	84	
3692	Dry & wat primary batteries	120	24	10,021	1,877.6	88	
3694	Engine electrical equipment	679	102	51,777	3,474.7	81	
3695	Magnetic & optical recording media	339	29	31,345	4,269.9	90	
3699	Electrical equip. & supplies n.e.c.	2,027	151	86,380	8,541.6	68	

SIC 37 TRANSPORTATION EQUIPMENT

3711	Motor vehicles & passenger car bodies	1,055	162	274,036	29,694.3	96	
3713	Truck & bus bodies	936	84	49,924	4,576.8	70	
3714	Motor vehicles parts & accessories	4,474	747	420,132	38,977.7	85	
3715	Truck trailers	751	56	29,734	2,478.2	63	
3716	Motor homes	178	25	8,434	1,451.4	66	
3721	Aircraft	398	88	305,082	28,808.3	99	
3724	Aircraft engines & engine parts	637	167	200,005	17,990.9	95	
3728	Aircraft parts & equipment n.e.c.	1,646	210	132,501	10,611.2	79	
3731	Ship building & repairing	751	105	141,175	12,707.3	92	
3732	Boat building & repairing	2,742	114	54,283	4,222.7	54	
3743	Railroad equipment	264	55	25,128	3,089.2	81	
3751	Motorcycles, bicycles & parts	489	8	8,018	678.4	45	
3761	Guided missiles & space vehicles	121	47	120,665	12,172.3	99	
3764	Space-propulsion units & parts	60	30	39,159	3,872.6	99	
3769	Space-vehicle equipment n.e.c.	62	23	15,274	1,380.4	95	
3792	Travel trailers & campers	650	53	17,794	1,334.4	61	
3795	Tanks & tank components	38	12	20,776	2,180.9	97	
3799	Transportation equipment n.e.c.	721	19	11,564	951.5	41	

SIC 38 INSTRUMENTS

3812	Search & navigation equipment	948	212	222,176	20,466.2	94	
3821	Laboratory apparatus & furniture	520	37	17,590	1,560.9	59	
3822	Environmental controls	707	62	37,596	3,561.3	66	
3823	Industrial process-control instruments	1,937	109	66,113	6,714.5	64	
3824	Fluid meters & counting devices	328	35	13,832	1,259.9	57	
3825	Electricity-measuring instruments	1,548	126	77,228	7,073.5	71	
3826	Laboratory analytical instruments	555	55	28,607	2,857.1	70	
3827	Optical instruments & lenses	800	36	21,505	1,704.8	50	
3829	Measuring & controlling devices n.e.c.	1,666	84	43,433	3,931.3	45	
3841	Surgical & medical instruments	2,187	213	103,084	9,980.7	66	
3842	Surgical appliances & supplies	2,999	168	82,358	6,471.4	62	
3843	Dental equipment & supplies	933	21	14,807	944.3	35	
3844	X-ray apparatus & tubes	214	18	7,115	924.6	60	
3845	Electromedical equipment	375	45	20,792	2,332.5	70	
3851	Ophthalmic goods	1,403	34	27,249	1,700.0	35	
3861	Photographic equipment & supplies	1,316	117	93,771	9,263.0	82	
3873	Watches, clocks, watchcase & parts	417	30	12,864	1,110.2	70	

SIC 39 MISCELLANEOUS MANUFACTURING

3911	Jewelry, precious metal	4,153	60	41,274	4,187.4	36	
3914	Silverware & plated & stainless ware	529	14	6,698	357.8	40	
3915	Jewelers materials & lapidary work	853	4	6,773	406.4	16	
3931	Musical instruments	788	31	14,170	782.4	47	
3942	Dolls & stuffed toys	692	9	7,488	346.0	34	
3944	Games, toys & children's vehicles	1,950	50	33,315	2,529.3	53	
3949	Sporting & athletic goods n.e.c.	4,250	84	59,299	4,328.4	34	
3951	Pens & mechanical pencils	161	26	11,781	870.1	78	
3952	Lead pencils & art goods	360	14	6,907	425.8	51	
3953	Marking devices	1,171	15	12,031	531.0	19	
3955	Carbon paper & inked ribbons	261	20	8,482	867.1	55	
3961	Costume jewelry	1,573	30	22,410	1,338.5	35	
3965	Fasteners, buttons, needles & pins	481	24	13,417	1,028.0	39	
3991	Brooms & brushes	400	38	15,388	1,180.0	55	
3993	Signs & advertising specialties	8,760	143	93,438	5,912.1	26	
3995	Burial caskets	261	15	9,568	636.3	61	
3996	Hard-surface floor coverings	40	11	9,661	1,172.4	95	
3999	Manufacturing industries n.e.c.	4,889	159	83,147	5,230.9	45	

TRANSPORTATION AND PUBLIC UTILITIES

SIC 40 RAILROADS				
------------------	--	--	--	--

BUSINESS-TO-BUSINESS SELLING

1990 ESTIMATE							1990 ESTIMATE						
SIC	Industry	Establishments		Employment	Shipments Receipts (\$ Mil.)	% In Large Estab.	SIC	Industry	Establishments		Employment	Shipments Receipts (\$ Mil.)	% In Large Estab.
		Total	Large						Total	Large			
4119	Local passenger transportation n.e.c.	6,717	69	100,440	3,231.4	12	6035	Federal savings institutions	11,562	398	250,959	15,842.0	43
4121	Taxis	2,541	44	36,145	974.1	24	6036	Nonfederal savings institutions	4,103	122	83,272	5,256.6	33
4131	Intercity and rural bus transportation	1,039	28	20,273	881.8	35	6061	Federally chartered credit unions	3,830	60	57,517	3,630.8	25
4141	Local bus charter service	497	16	11,370	549.8	28	6062	Nonfederally chartered credit unions	3,823	52	63,004	3,977.2	41
4142	Nonlocal bus charter service	1,165	8	15,636	861.9	8	6081	Branches & agencies of foreign banks	304	37	14,229	898.2	57
4151	School buses	2,157	84	52,130	2,026.5	27	6082	Foreign-trade & banking institutions	165	22	15,146	956.1	81
4173	Bus terminal & service facilities	453	16	9,259	491.4	47	6091	Nondeposit trust facilities	103	9	3,858	243.5	67
SIC 42 TRUCKING & WAREHOUSING							6099	Functions related to depository banking	2,370	51	33,932	2,142.0	58
4212	Local trucking without storage	48,145	210	347,837	22,107.1	15	SIC 61 NONDEPOSITORY CREDIT INSTITUTIONS						
4213	Trucking, except local	39,091	856	597,391	51,020.8	33	6111	Federal & federally sponsored credit	1,161	61	32,940	2,889.5	63
4214	Local trucking with storage	6,316	49	80,952	4,610.2	12	6141	Personal credit institutions	10,780	175	124,960	10,961.5	44
4215	Courier services except air	1,493	79	56,972	2,623.5	63	6153	Short-term business credit	1,893	99	65,307	5,728.7	69
4221	Farm product warehousing & storage	1,895	8	13,703	1,101.8	10	6159	Misc. business credit institutions	4,196	106	62,400	5,477.7	38
4222	Refrigerated warehousing & storage	1,393	49	33,825	2,431.2	51	6162	Mortgage bankers & loan corresp.	9,038	248	151,371	13,278.3	42
4225	General warehousing & storage	16,033	532	318,819	22,496.2	54	6163	Loan brokers	5,193	11	34,160	2,996.5	6
4226	Special warehousing & storage n.e.c.	3,002	95	55,346	4,562.8	47	SIC 62 SECURITY & COMMODITY BROKERS						
4231	Trucking terminal facilities	2,043	140	76,306	5,302.0	56	6211	Security brokers & dealers	14,885	307	327,893	27,324.3	49
SIC 44 WATER TRANSPORTATION							6221	Commodity contracts brokers & dealers	2,178	26	20,251	1,687.6	22
4412	Deep sea foreign transport of freight	465	41	20,041	4,253.0	71	6231	Security & commodity exchanges	336	15	8,560	713.3	66
4424	Deep sea domestic transport of freight	280	27	10,384	2,189.7	69	6282	Investment advice	7,394	55	68,713	5,726.1	26
4432	Freight transport on the Great Lakes	34	1	757	145.4	23	6289	Security & commodity services n.e.c.	760	23	13,922	1,160.2	60
4449	Water freight transportation n.e.c.	444	38	15,337	1,917.1	63	SIC 63 INSURANCE CARRIERS						
4481	Deep sea non-ferry passenger transport	86	19	10,499	946.9	90	6311	Life insurance	5,842	676	499,590	31,077.0	81
4482	Ferries	101	10	4,997	366.3	75	6321	Accident & health insurance	928	179	117,788	7,327.0	85
4489	Water passenger transport n.e.c.	430	19	8,056	553.9	53	6324	Hospital & medical service plans	570	192	136,112	8,466.8	92
4491	Marine cargo handling	993	64	26,739	2,560.5	55	6331	Fire, marine & casualty insurance	3,606	872	525,352	32,679.5	88
4492	Towing & tugboat services	943	40	18,731	1,365.6	36	6351	Surety insurance	504	62	29,031	1,805.9	71
4493	Marinas	4,026	7	24,296	2,041.3	4	6361	Title insurance	1,289	69	37,988	2,363.0	41
4499	Water transportation services n.e.c.	1,580	19	17,040	1,246.7	32	6371	Pension, health & welfare funds	325	61	30,031	1,868.1	78
SIC 45 AIR TRANSPORTATION							6399	Insurance carriers n.e.c.	111	27	10,615	660.3	84
4512	Scheduled air transportation	2,358	299	276,453	29,265.6	87	SIC 64 INSURANCE AGENTS, BROKERS & SERVICE						
4513	Air courier services	897	59	40,915	3,348.8	62	6411	Insurance agents, brokers & svce.	116,203	618	713,121	59,426.5	25
4522	Nonscheduled air transportation	2,893	45	32,800	3,021.2	30	SIC 65 REAL ESTATE						
4581	Airports, flying fields & services	5,663	284	222,513	14,179.2	76	6512	Operators of nonresidential buildings	61,030	141	238,432	29,021.0	19
SIC 46 PIPELINES, EXCEPT NATURAL GAS							6513	Operators of apartment buildings	50,349	137	214,434	26,100.0	12
4612	Crude petroleum pipelines	412	21	11,976	5,602.2	47	6514	Operators of nonapartment dwellings	5,802	4	14,600	1,777.1	4
4613	Refined petroleum pipelines	325	13	7,722	3,612.3	50	6515	Operators of mobile home sites	9,753	1	21,441	2,609.7	3
SIC 47 TRANSPORTATION SERVICES							6517	Lessor of railroad property	24	0	71	8.6	0
4724	Travel agencies	22,785	55	120,424	5,461.0	9	6519	Lessor of real property n.e.c.	5,457	11	25,795	3,139.7	45
4725	Tour operators	1,962	18	17,650	800.4	24	6531	Real estate agents & managers	116,851	212	605,985	73,758.1	7
4729	Passenger transport arrangement n.e.c.	1,112	51	30,663	1,839.8	70	6541	Title abstract offices	3,524	4	21,807	2,617.7	3
4731	Arrangement of freight transportation	12,803	111	121,793	19,050.9	29	6552	Land subdividers & developers n.e.c.	33,290	130	172,634	21,012.3	17
4741	Rental of railroad cars	161	5	2,176	408.0	42	6553	Cemetery subdividers & developers	3,451	12	22,815	2,777.0	9
4783	Packing & crating	1,022	21	12,300	918.4	28	SIC 67 HOLDING & OTHER INVESTMENT OFFICES						
4785	Toll roads etc. & freight inspection	317	17	9,873	639.8	75	6712	Offices of bank holding companies	1,013	55	36,573	3,288.7	59
4789	Transportation services n.e.c.	758	20	22,552	1,312.5	63	6719	Offices of holding companies n.e.c.	6,905	70	55,684	5,007.2	44
SIC 48 COMMUNICATIONS							6722	Open-end management investment	867	42	27,867	2,505.8	69
4812	Radiotelephone communications	1,825	95	53,987	4,773.3	58	6726	Unit investment trusts	561	6	6,738	605.9	45
4813	Nonradiotelephone communication	5,602	718	488,755	62,640.8	83	6732	Educational, religious, etc., trusts	996	15	11,047	993.4	32
4822	Telegraph, electronic mail, etc.	793	24	16,128	1,405.6	66	6733	Trusts n.e.c.	1,135	21	14,605	1,313.3	44
4832	Radio broadcasting stations	7,351	76	131,816	4,977.6	12	6792	Oil royalty traders	1,468	1	5,213	468.8	3
4833	Television broadcasting stations	1,975	326	121,081	9,333.3	64	6794	Patent owners & lessors	2,379	36	30,081	2,704.9	27
4841	Cable & other pay television svcs.	5,303	296	126,131	7,883.2	52	6798	Real estate investment trusts	3,153	16	18,239	1,640.1	22
4899	Communications services n.e.c.	1,031	60	44,327	5,314.5	78	6799	Investors n.e.c.	6,281	31	40,680	3,658.0	20
SIC 49 ELECTRIC, GAS & SANITARY SERVICES							SERVICES						
4911	Electric services	5,448	775	459,143	137,453.6	76	SIC 70 HOTELS & OTHER LODGING PLACES						
4922	Natural gas transmission	1,016	44	39,912	16,625.3	57	7011	Hotels & motels	51,976	3,235	1,484,283	55,878.8	54
4923	Gas transmission & distribution	743	59	28,133	8,704.1	59	7021	Rooming & boarding houses	1,136	12	10,288	316.4	30
4924	Natural gas distribution	1,466	135	59,808	13,955.9	63	7032	Sporting & recreational camps	2,638	3	13,049	703.7	3
4925	Gas production &/or distribution	546	9	8,498	1,699.6	39	7033	Recreational vehicle parks & campsites	5,574	5	12,024	534.4	7
4931	Electric & other services combined	563	84	37,715	9,851.1	67	7041	Membership basis organization hotels	960	15	11,024	376.8	32
4932	Gas & other services combined	171	19	7,800	1,782.2	66	SIC 72 PERSONAL SERVICES						
4939	Combination utilities n.e.c.	192	22	9,447	2,127.1	69	7211	Power laundries, family & commercial	2,967	48	32,848	807.1	20
4941	Water supply	4,423	94	84,006	780.2	48	7212	Garment pressing & cleaners' agents	7,749	2	28,980	846.7	1
4952	Sewerage systems	890	25	18,731	1,456.9	36	7213	Linen supply	1,614	218	71,412	2,995.7	47
4953	Refuse systems	8,401	143	132,786	10,182.2	23	7215	Coin-operated laundries & drycleaning	13,911	12	45,643	1,244.1	5
4959	Sanitary services n.e.c.	1,435	3	9,683	487.9	10	7216	Drycleaning plants, except rugs	20,282	25	128,925	3,405.4	5
4961	Steam & air-conditioning supply	118	4	2,574	181.0	38	7217	Carpet & upholstery cleaning	11,075	15	48,151	1,504.4	5
4971	Irrigation systems	586	5	7,455	498.5	17	7218	Industrial laundries	852	114	38,427	1,642.9	55
FINANCE, INSURANCE & REAL ESTATE							7219	Laundry & garment services n.e.c.	4,383	12	18,123	426.4	13
SIC 60 DEPOSITORY INSTITUTIONS							7221	Photographic portrait studios	13,831	33	55,935	2,186.7	21
6011	Federal reserve banks	38	34	21,428	1,352.7	99	7231	Beauty shops	112,780	16	379,431	6,797.5	1
6019	Central reserve depositories n.e.c.	41	7	2,836	179.0	87	7241	Barber shops	20,332	0	44,496	782.8	0
6021	National commercial banks	23,156	961	904,910	57,123.3	62							
6022	State commercial banks	24,481	720	657,983	41,535.8	44							
6029	Commercial banks n.e.c.	1,607	64	50,090	3,162.0	56							

1990 ESTIMATE

SIC	Industry	Establishments		Employment	Shipments Receipts (\$ Mil.)	% In Large Estab.
		Total	Large			
7251	Shoe repair shops & shoeshine parlors	6,523	0	8,411	224.9	0
7261	Funeral service & crematories	18,826	12	90,841	5,606.3	3
7291	Tax return preparation services	6,231	32	33,165	829.1	20
7299	Misc. personal services n.e.c.	13,668	87	92,649	3,686.5	25

SIC 73 BUSINESS SERVICES

7311	Advertising agencies	21,677	141	161,584	15,661.7	34
7312	Outdoor advertising services	1,488	4	10,129	871.1	6
7313	Radio, TV & publishers' reps.	1,460	15	13,138	1,407.0	33
7319	Advertising n.e.c.	1,677	15	13,083	1,177.1	20
7322	Adjustment & collection services	4,982	68	70,225	3,511.3	22
7323	Credit reporting services	1,571	58	33,645	1,884.1	43
7331	Direct mail advertising services	4,592	165	76,088	4,260.9	41
7334	Photocopying & duplicating svcs.	5,404	19	31,490	1,920.4	9
7335	Commercial photography	8,596	7	26,504	1,585.6	6
7336	Commercial art & graphic design	17,949	21	64,708	4,739.5	6
7338	Secretarial & court reporting svcs.	6,580	7	25,506	1,032.8	4
7342	Disinfecting & pest control services	10,809	15	75,131	2,579.6	8
7349	Building maintenance svcs. n.e.c.	30,324	1,310	660,019	14,355.4	59
7352	Medical equip. rental & leasing	2,563	8	18,771	1,509.5	11
7353	Heavy construction equip. rental	5,528	14	36,106	3,493.1	6
7359	Equipment rental & leasing n.e.c.	26,574	52	140,001	11,114.3	6
7361	Employment agencies	13,288	347	227,592	18,684.2	55
7363	Help supply services	8,458	600	283,699	15,887.1	74
7371	Computer programming svcs.	12,035	119	136,670	12,621.2	21
7372	Prepackaged software	7,578	109	99,121	9,111.9	34
7373	Computer integrated systems design	5,056	107	86,695	10,769.6	41
7374	Computer processing & data prep.	8,261	344	206,903	13,389.1	50
7375	Information retrieval services	525	20	15,605	1,430.8	59
7376	Computer facilities mgmt. services	543	10	8,769	606.6	51
7377	Computer rental & leasing	1,363	9	12,741	1,592.6	14
7378	Computer maintenance & repair	3,532	37	44,289	3,625.9	30
7379	Computer services n.e.c.	9,503	42	77,722	6,209.8	17
7381	Detective and armored car svcs.	7,830	763	278,707	6,251.4	63
7382	Security systems services	1,844	76	36,500	2,042.8	55
7383	News syndicates	578	17	11,905	1,043.2	63
7384	Photofinishing laboratories	9,773	79	57,820	3,039.0	26
7389	Business services n.e.c.	91,239	736	630,967	35,491.9	35

SIC 75 AUTO REPAIR, SERVICES & PARKING

7511	Tuck rental & leasing	6,998	41	56,615	6,810.2	20
7514	Passenger car rental	7,122	62	75,587	7,912.0	39
7515	Passenger car leasing	2,704	13	14,990	3,643.0	13
7519	Utility trailer rental	1,335	6	6,921	625.0	20
7521	Automobile parking	2,383	55	35,059	1,813.0	37
7532	Top & body repair & paint shops	43,246	9	139,829	7,441.8	1
7533	Automotive exhaust system repair shops	3,853	0	10,851	717.5	0
7534	Tire retreading & repair shops	2,339	5	12,646	932.8	15
7536	Automotive glass replacement shops	3,192	3	11,988	734.9	12
7537	Automotive transmission repair shops	5,008	0	15,662	869.8	0
7538	General automotive repair shops	78,681	31	215,196	11,951.3	3
7539	Automotive repair shops n.e.c.	24,591	12	73,780	4,038.1	4
7542	Carwashes	9,562	13	64,548	2,231.5	3
7549	Automotive services, except repair	10,525	17	60,541	2,828.0	11

SIC 76 MISCELLANEOUS REPAIR

7622	Radio & television repair shops	19,087	9	37,484	1,249.9	4
7623	Refrigeration service & repair	8,896	3	19,309	1,004.9	2
7629	Electrical & electronic repair shops n.e.c.	18,622	41	61,234	2,619.8	22
7631	Watch, clock & jewelry repair	3,121	3	7,902	269.8	6
7641	Reupholstery & furniture repair	14,480	2	25,719	753.4	2
7692	Welding repair	10,929	2	24,145	1,064.7	1
7694	Armature rewinding shops	2,960	5	14,333	799.8	5
7699	Repair services n.e.c.	61,210	76	185,830	8,850.0	14

SIC 78 MOTION PICTURES

7812	Motion picture & video tape production	11,555	118	108,903	13,508.4	39
7819	Services allied to motion pictures	2,570	49	28,007	2,567.3	36
7822	Motion picture & video tape distrib.	1,405	16	13,395	2,276.3	23
7829	Motion picture distribution services	207	2	1,646	102.9	15
7832	Non-drive-in motion picture theaters	2,707	29	36,541	1,151.3	22
7833	Drive-in motion picture theaters	390	1	2,505	82.7	5
7841	Video tape rental	14,177	10	67,283	2,416.0	2

SIC 79 AMUSEMENT & RECREATION

7911	Dance studios, schools & halls	4,713	4	21,299	478.8	2
7922	Theatrical producers & services	5,333	103	61,173	5,521.0	34
7929	Entertainers & entertainment groups	3,655	68	34,824	1,773.3	30
7933	Bowling centers	6,507	13	84,731	3,085.2	2
7941	Professional sports clubs & promoters	1,182	61	24,554	2,455.4	51
7948	Racing, including track operation	1,692	83	40,671	3,050.3	71
7991	Physical fitness facilities	7,283	54	74,831	2,047.1	13

1990 ESTIMATE

SIC	Industry	Establishments		Employment	Shipments Receipts (\$ Mil.)	% In Large Estab.
		Total	Large			
7992	Public golf courses	3,682	17	33,620	2,220.5	9
7993	Coin-operated amusement devices	3,705	31	37,888	2,296.4	56
7996	Amusement parks	1,170	47	79,333	5,277.5	87
7997	Membership sports & recreation clubs	12,918	242	222,838	8,545.2	18
7999	Amusement & recreation services n.e.c.	21,214	212	180,972	9,506.3	35

SIC 80 HEALTH

8011	Offices & clinics of medical doctors	142,592	869	1,209,948	93,629.4	23
8021	Offices & clinics of dentists	74,677	20	375,557	18,490.2	1
8031	Offices of osteopathic physicians	4,370	3	22,733	1,192.4	4
8041	Offices & clinics of chiropractors	17,962	3	59,333	3,281.7	1
8042	Offices & clinics of optometrists	11,763	4	50,642	2,728.2	2
8043	Offices & clinics of podiatrists	3,041	0	11,701	701.9	0
8049	Offices of health practitioners n.e.c.	9,528	82	65,460	3,141.9	24
8051	Skilled nursing care facilities	9,642	3,672	918,954	21,322.3	68
8052	Intermediate care facilities	1,960	303	118,450	2,355.3	44
8059	Nursing & personal care facilities n.e.c.	5,970	1,325	379,033	8,933.8	57
8062	General medical & surgical hospitals	7,073	4,993	4,063,768	207,646.4	98
8063	Psychiatric hospitals	1,222	665	317,640	15,272.8	94
8069	Specialty hospitals, except psychiatric	1,249	348	217,885	11,669.9	90
8071	Medical laboratories	5,986	186	107,969	7,329.0	49
8072	Dental laboratories	7,954	5	33,506	1,335.0	2
8082	Home health care services	3,634	448	174,855	5,233.1	64
8092	Kidney dialysis centers	521	3	10,912	718.1	4
8093	Specialty outpatient clinics n.e.c.	7,210	172	166,963	6,952.0	35
8099	Health & allied services n.e.c.	2,997	101	55,276	3,740.5	35

SIC 81 LEGAL SERVICES

8111	Legal services	110,831	889	869,729	57,481.3	24
------	----------------	---------	-----	---------	----------	----

SIC 82 EDUCATION

8211	Elementary & secondary schools	111,381	10,323	5,647,937	184,794.9	38
8221	Colleges & universities	4,898	1,983	2,013,456	111,726.7	96
8222	Junior colleges & technical institutes	1,604	794	330,242	13,737.4	92
8231	Libraries	16,006	411	328,057	9,243.0	28
8243	Data processing schools	1,025	15	12,839	800.9	24
8244	Business & secretarial schools	951	35	27,369	1,138.6	25
8249	Vocational schools n.e.c.	4,484	233	117,569	6,014.2	47
8299	Schools & educational svcs. n.e.c.	10,191	196	127,550	4,955.2	38

SIC 83 SOCIAL SERVICES

8322	Individual & family social services	29,475	424	361,908	11,346.5	27
8331	Job training & related services	4,286	443	171,300	4,564.8	55
8351	Child day care services	61,399	103	402,629	6,013.7	5
8361	Residential care	9,691	762	327,722	8,976.6	56
8399	Social services n.e.c.	8,086	280	153,877	12,050.7	41

SIC 84 MUSEUMS, BOTANICAL GARDENS & ZOOS

8412	Museums & art galleries	4,327	101	61,744	2,923.3	41
8422	Botanical & zoological gardens	267	32	10,607	493.2	61

SIC 86 MEMBERSHIP ORGANIZATIONS

8611	Business associations	13,606	69	94,908	7,525.4	16
8621	Professional membership orgs.	4,685	74	51,871	4,252.5	40
8631	Labor organizations	9,588	273	174,754	10,485.2	62
8641	Civic, social & fraternal assns.	26,999	420	337,333	11,957.1	31
8651	Political organizations	878	8	7,014	526.1	16
8661	Religious organizations	99,724	604	758,174	26,887.1	19
8699	Membership organizations n.e.c.	5,968	144	88,330	5,085.9	35

SIC 87 ENGINEERING & MANAGEMENT SERVICES

8711	Engineering services	41,061	840	626,566	43,501.9	46
8712	Architectural services	16,745	116	139,613	9,727.3	17
8713	Surveying services	4,122	8	28,875	1,103.5	9
8721	Accounting, auditing & bookkeeping	54,551	541	509,393	23,209.0	42
8731	Commercial physical research	6,341	172	128,349	10,983.5	49
8732	Commercial nonphysical research	8,579	56	82,808	6,665.5	16
8733	Noncommercial research orgs.	3,610	82	87,998	7,103.4	51
8734	Testing laboratories	4,261	46	65,702	3,908.8	28
8741	Management services	17,845	507	274,203	17,366.1	59
8742	Management consulting services	40,361	196	210,693	16,207.1	28
8743	Public relations services	8,366	66	73,510	6,125.8	49
8744	Facilities support mgmt. services	292	39	13,593	948.8	72
8748	Business consulting services n.e.c.	21,371	101	113,675	9,985.3	26

SIC 89 MISCELLANEOUS SERVICES

8999	Services n.e.c.	7,903	53	49,828	2,755.8	36
------	-----------------	-------	----	--------	---------	----

COMPUTERS

BY THAYER C. TAYLOR, SENIOR EDITOR

LAPTOP FEVER GRIPS MARKETERS

Convinced that portable PCs have improved to the point where they're viable for salespeople, marketers last year rushed to outfit salespeople with laptops. According to *S&MM*'s fifth annual survey of PC usage in sales, more than a fourth (26.1%) of PC-using firms outfitted salespeople with laptops, more than double the previous year's ratio. In terms of numbers of salespeople receiving PCs, laptops are the leading medium with a 36.2% ratio. (The survey drew replies from 193 marketers with an aggregate sales force of 10,645. Usable replies totaled 185.)

Other survey highlights:

- Marketers continue to give PCs to salespeople on a selective, rather than universal, basis.
- Better customer relations and proposal preparation are the leading sources of productivity gains.
- Word processing, account management, and proposal preparation are the most widely used PC applications.

The swing to laptops is broad-based but is especially striking among smaller firms (less than 10 salespeople). There, the laptop ratio of firms using PCs soared 19.7% to 24.4% in 1990. Among medium-sized firms (10-99 salespeople), it rose half as fast, to 25.6%. Because laptops have always been most popular among large firms (100 or more salespeople), the increase was a modest 1.7 points, to 35.0%.

Laptop demand will remain high this year. More than three-fifths (62.5%) of the respondents say they're in the market for PCs this year. Of those in a buying mood, more than twice as many lean to laptops vs. desktops.

Technological improvements are spurring the laptop run-up: clearer screens, larger storage from hard disk drives, power-saving processors, lightweight notebook-types that fit in a briefcase, and accessories such as small, light printers and modems.

The overriding catalyst, however, is marketers' determination to get salespeople to spend less time in the office and more time in front of customers. So strong is that goal that mar-



Portables Take Over

% USAGE AMONG FIRMS WITH PCs

	ALL COMPANIES	SMALL	MEDIUM	LARGE	ALL SALES-PEOPLE
Desktop	55.9%	66.7%	52.6%	20.0%	11.4%
Laptop	26.1	24.4	25.6	35.0	36.2
Desktop & laptop	12.2	2.6	15.4	30.0	11.2
Hand-held terminal	2.7	2.2	2.5	5.0	30.9*
Desktop, laptop terminal	3.2	1.1	3.8	10.0	10.2

*Figure skewed by one company that outfitted its 1,700 salespeople with hand-held terminals. If that company is eliminated, ratios are: desktop, 16.5%; laptop, 52.3%; desktop & laptop, 16.2%; hand-held terminal, 0.3%; and desktop, laptop & terminal, 14.7%.

Buying Plans for 1991

COMPANY SIZE	YES	NO	UNDECIDED	DESKTOP	LAPTOP	BOTH
Small	62.3%	14.82%	2.9%	25.0%	68.2%	4.5%
Medium	69.7	19.7	10.6	26.1	65.2	4.3
Large	80.0	15.0	5.0	25.0	56.3	12.5
Nonuser of PCs	47.4	47.4	5.2	66.7	22.2	0.0
Total	62.5%	28.3%	9.2%	28.7%	61.7%	5.2%

Note: PC type will not add to 100% because of companies undecided regarding which type they will buy.

SOURCE: Sales & Marketing Management's fifth annual PC survey. Reproduction prohibited.

ketters are willing to overlook the fact that portables still sell at a price premium—dollar-for-dollar, desktops still pack more bang, via functionality, for the buck.

Even so, marketers retain their cost sensitivity. Thus, only 60% of the salespeople in PC-using firms have their own units, while another 25% share machines. The remainder, presumably, do without. This also reflects the fact that many firms let the salesperson decide whether or not to use a PC.

If they're selective in doling out PCs, marketers overwhelmingly feel that sales automation is proving its worth. More than three-fourths (78%)

report that PCs have helped salespeople become more productive. Small firms are the most optimistic with 81% reporting productivity gains.

Median gains were consistent regardless of company size, although small firms did slightly better, with a 22.5% gain; both medium and large firms weighed in with 20%.

Improved customer relations got the most votes by far for helping boost salesperson productivity. This takes the form of "answering questions quickly," "constant client contact," "better customer tracking," "better follow-up," "quality of customer information," and "quicker response to customer needs."

Applications by Sales Force Size

APPLICATIONS	TOTAL	SMALL	MEDIUM	LARGE
Word processing	78%	79%	79%	75%
Account management	60	52	68	65
Proposal preparation	55	54	55	60
Call reports	53	53	50	65
Account/prospect profile	52	52	52	50
Spreadsheets	52	44	58	60
Lead tracking	42	46	42	30
Sales presentations	41	41	41	45
Call planning	41	41	42	35
Sales forecasts	40	35	47	35
Sales analysis	38	33	41	45
Direct marketing	34	30	39	30
Territory management	33	25	39	40
E-mail	32	23	33	60
Graphics	27	25	27	35
Telemarketing	26	25	29	15
Order entry	25	23	21	45
Inventory/ship. status	19	13	20	45
Market analysis	19	17	21	25
Budgeting	18	17	23	10
Mapping	9	9	6	15

SOURCE: Sales & Marketing Management's fifth annual PC survey. Reproduction prohibited.

PC-prepared proposals that win orders are the next most popular source. Marketers cite "professional proposals," "use of graphics," "communications on proposals," and "time saved."

Account management, time management, and more effective correspondence deadlock as the third biggest source of productivity boosts. Account management is helped by "overall account knowledge" and "better details of account management," while time-management benefits flow from "better scheduling" and "improved utilization of time."

Lead tracking, especially in the

area of follow-up, and better organization of salesperson activities tie as the next most popular source. Close behind: revenue-producing sales calls as a result of "sales call effectiveness" and "more calls."

Word processing is far and away the most widely used PC application. That's not surprising, since it's the best entry-level software for a salesperson newly exposed to PCs. Also, the salesperson can use it for targeted mailings as well as for composing call reports and memos and maintaining rudimentary files.

The next most popular applica-

tions, in order: account management, proposal preparation, call reports, and account/prospect profiles. Significantly, if these applications have anything in common, it's the goal of solidifying customer relations.

The biggest gains in usage were reported for E-mail packages, up 14% from a year earlier. However, that application still ranks 14th in a list of 21, indicating that marketers are still missing a bet on exploiting the PC's communications potential.

This shortcoming is confirmed by another survey finding; namely, only 35% of the PC-using respondents have communications networks in place that, for example, permit salespeople in scattered locations to exchange files.

Another application where marketers attitudes must change is mapping, which ranks at the bottom. Results from the 1990 Census of Population and Housing are already flowing from the Census Bureau. Mapping packages make it easier for marketers to gain better insights into the information in those reports, especially when it comes to uncovering market opportunities as well as the strengths and weaknesses of current sales strategy.

Making it easier for salespeople to get timely, up-to-date information remains a high priority among marketers. Almost three-fourths (73%) of the respondents give their reps access to computerized databases. Among these firms, however, 67% limit the access to internal databases—such as factory shipments or customer records—and only 15% make external databases available to salespeople.

When it comes to the downside of PCs, costs remain a formidable barrier, despite the price wars wracking the industry. In fact, among the reasons firms aren't using PCs, costs are cited twice as often as the deadlocked second-ranked objections: computer phobia and lack of knowledge.

The traditional suspicion that sales reps will become computer addicts still lives. As one nonuser explains tartly: "No drugs allowed."

USING "STREET SMARTS" WHEN BUYING A PC

Because PCs are sold mostly as a commodity-type product, manufacturers' list prices have the same status as those in consumer electronics: as a starting point for negotiating discounts. Because of this, marketers planning to buy desktop or laptop PCs for their sales

Continued on page 76

Productivity Up a Strong 20%

SALES FORCE SIZE	PRODUCTIVITY GAIN			
	YES	NO	UNKNOWN	MEDIAN
Small (Under 10)	81%	13%	6%	22.5%
Medium (10-99)	74	19	7	20.0
Large (100 & over)	80	10	10	20.0
Total:	78%	15%	7%	20.0%

SOURCE: Sales & Marketing Management's fifth annual PC survey. Reproduction prohibited.